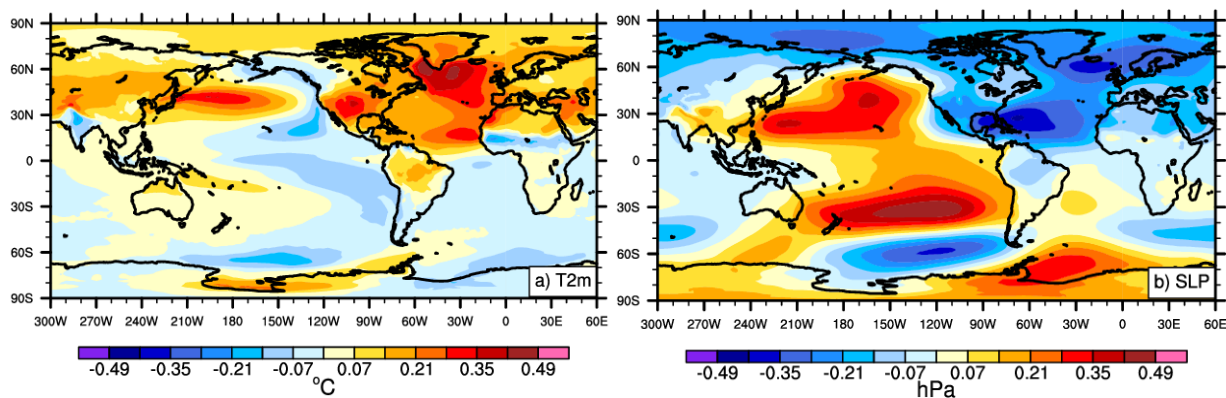


Title: The North Atlantic decadal variability: its climate impacts and its origins

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Abstract: During the last century, the North Atlantic surface temperature exhibited superimposed long-term warming trend and multidecadal fluctuations. This multidecadal variability is referred to as the Atlantic Multidecadal Variability (AMV). The AMV has been pointed as the source of marked climate anomalies and associated human impacts over many areas of the globe. Yet, the limited historical record in comparison to the timescale of interest does not allow to unequivocally attribute those impacts to the AMV. To tackle this issue, we use numerical coupled climate models in which the North Atlantic surface temperature is restored to observed AMV anomalies. In this presentation, we investigate the AMV impacts on Global climate with a particular focus on the tropical Pacific response as well as on the North American and European summer climate responses. We will conclude with thoughts and comments on the origins of the AMV and their implication for decadal climate prediction.



**Figure:** Multi-model mean differences between warm and cold North Atlantic conditions from AMV idealized simulations. (a) Air surface temperature and (b) sea level pressure for the June to September season.